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Cultural Determinants of Nutritional Behavior

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"Once upon a time a monkey and a fish were caught up in a great flood. The monkey, agile and experienced, had the good fortune to scramble up a tree to safety. As he looked down into the raging waters, he saw a fish struggling against the swift current. Filled with a humanitarian desire to help his less fortunate fellow, he reached down and scooped the fish from the water. To the monkey's surprise the fish was not very grateful for this aid."

This fable quoted by Foster illustrates the cultural pitfalls that have plagued nutrition programs at home and abroad.

What the nutritionist considers an eagerness to help—a gesture of generosity and selflessness that cannot be misunderstood or misinterpreted—has at times been received with less than the expected appreciation and enthusiasm.

Cultural and social influences are imperfectly understood; even as simple a universal act as eating is culturally patterned. Our middle class urban culture tells us to eat our heavy meal in the evening, approaching it as a pleasant social occasion and not just a time for satisfying hunger. It tells us what particular combination of foods to eat; how to prepare the meal—with consideration for nutrients and esthetics; how to eat it—on a table with plates, napkins, and utensils, with a minimum of eating sounds. These habits contrast with those of some cultures where people eat on the floor, use their fingers, and smack their lips to express appreciation of what they are eating.

Eating is learned behavior. We're born without a system of eating habits but are reared so that, as adults, we become hungry at certain times for particular things with definite attitudes toward food. Biological hunger becomes culturally patterned appetite; we adopt a nutritional behavior pattern which we refer to as food habits.

BEHAVIORAL SCIENCES RECOGNIZE CULTURAL ASPECTS OF FOOD

Why are we concerned with nutritional behavior or food habits? In our affluent, literate, science-and-health-oriented U.S.A., nutrition practice lags far behind the needs and possibilities. Dietary levels have to be improved and we can use the behavioral sciences to help understand food habits.

The approach of the behavioral sciences is to view any particular food habit as an inseparable part of the total pattern of human behavior. Food habits are interwoven with the entire way of life of a people and the culture must be understood to effect changes in food habits with a minimum of disruption. In other words, to improve dietary levels, it is as essential to examine such factors as learning, motivation, attitudes, and values as it is to study nutrients, their function and sources.

The interrelations of behavioral patterns involved in food choice are complex, but studies have provided insight into the processes by which food habits are formed and changed.

FORMATION OF FOOD HABITS

Food habits are formed by both objective and subjective factors. The objective includes physical, biological, and technological influences, and the subjective covers cultural, social, and psychological ones. Food habits are basically determined by availability. Objective factors are related to physical availability; subjective factors are related to cultural availability. Both factors exist in an economic setting. Although very important, the economics of food

is omitted here as it is better understood than the other factors.

Physical availability of food

Since cultural availability arises from physical availability, the latter is presented first with illustrations from Hawaii and the Pacific Basin countries based on research and observation.

Food production.—Food habits are based on the type of food production in a culture. The natural environment (ecology, geography, climate), cultivation practices that support plant and animal life, and the state of technology and industrialization determine food patterns.

In a near subsistence economy, such as that found in a village on Yap (an island group in the Trust Territory of the Pacific) almost all plant and animal foods consumed are self-produced or gathered. In a market economy, such as Hawaii, food is supplied from large scale commercial agriculture, both domestic and foreign. Individuals reared in these contrasting economies will show distinct differences in diet.

Food preservation.—Food habits are also based on the ability of a people to preserve food. Some cultures practice a feast or famine type of existence, whereas others preserve food for periods of scarcity.

Drying is probably one of the oldest methods of preservation. We think of freeze-drying as a relatively new technological process, yet publications in the late 1800's report that in Japan, "tofu," or soybean curd, was being freeze-dried. Frozen cubes of this curd, being high in moisture, formed uniform ice crystals. When thawed, these crystals left a porous product which was easily dried and kept for several years.

The "100-year-old egg" of the Chinese and various fermented fish sauces indispensable in many Southeast Asia dishes originated through the necessity for preservation. So the ability to preserve is reflected in food habits.

Food distribution.—The ability of a culture to distribute food—the transportation, storage, marketing facilities, and other channels by which food reaches the consumer—affects what can be eaten. When the Japanese emigrated to Hawaii in large numbers at the beginning of this century, most Japanese foods could be imported and food habits remained essentially the same as that of Japan. After the bombing of Pearl Harbor, the inability to import food accelerated changes in food habits.

Food preparation.—The different methods of preparing and cooking food influence food habits and the nutritive value of food. In Yap villages, some families put all their food into one pot and simmer it as long as the fire burns.

Contrast this with our methods which give careful attention to vitamin and mineral retention.

Occasionally, we hear of older Oriental women who seldom use an oven because baking and roasting are not familiar ways of preparing food.

Material influences.—The type of materials available—the utensils and tools, equipment and facilities for food production, distribution, preparation and eating—all help to standardize and perpetuate food behavior.

Scarcity of fuel, as in China, has led to the stir-fry method of cooking; food is cut into small pieces and cooked quickly. Contrast that with boiled and pot roast dinners prepared where fuel is plentiful.

Cultural availability of food

Cultural availability refers to edible material that one's culture considers to be food. For example, slugs, grubs, and bugs may not be considered food by some cultures, but other cultures—such as the African and French—eat them. Cultural availability of food is expressed in both the conscious and unconscious decisions one makes based on experience and knowledge.

Man in almost every culture eats only a portion of the available food supply around him. According to the Committee on Food Habits, "Foods are categorized . . . by a whole complicated set of beliefs and practices that regulate the way in which each human, born with common needs becomes a socialized individual, accepting and rejecting parts of his environment as edible and nonedible at different times, for different purposes, in different situations."

Food habits appear to be inscrutable, but categories have been identified that are applicable to various cultures.

Social status.—Food habits are patterned in relation to social status or caste. In almost any culture, the available food supply is differentiated—foods that are rare, fine, delicate, and expensive seem to be the most desirable. Society expresses social distinctions in the foods eaten. Certain foods associated with low social status are avoided and rejected by the next higher group.

The early Japanese arrivals in Hawaii quickly switched from millet, barley, and wheat to white rice—the prestige staple. When white rice became common, eating American foods became a higher niche, socially.

However, with the switch to American foods, Hawaiians did not discard rice so that it is not unusual, even today, to see rice eaten with a meal of spaghetti or macaroni. When you order chili con carne and beans in Hawaii, it is served over rice.

One more illustration: years ago papaya was considered pig food in Hawaii. However, through the combined efforts of horticulturists, agricultural economists, and nutritionists,

it is now a common daily breakfast item, and has exotic appeal for visitors. At an American Dietetic Association breakfast meeting last October, the Hawaii Association served fresh pineapple cocktail in a whole papaya—status food fit for guests.

Physical status.—Food is patterned in relation to the physical status of persons—age, sex, pregnancy, illness, etc.

Every society has food for babies—milk and soft, bland foods. What age group does peanut butter suggest? Many societies have special foods associated with pregnancy and lactation. Local mores and taboos also influence food habits. Some groups in Hawaii avoid eating double bananas to ward off multiple births or joined digits; this belief is analogous to folklore which says eating strawberries marks the baby.

In our American culture, salads are considered feminine food suitable particularly for the reducing female. Moore says steak and potatoes are thought of as masculine foods—and so it goes. It is these views—a pregnant mother who doesn't want milk or the elderly patient who doesn't want "baby food" such as custard—that are cultural stumbling blocks to the acceptance of new foods.

Social or ceremonial role.—Food is patterned in relation to its social or ceremonial role. Isn't food an important part of social celebrations—birthdays, graduations, weddings, and funerals?

The Thanksgiving turkey, Christmas goose, Easter ham, the moon cake of Hawaii eaten on Chinese New Year's, the "mochi" or glutinous rice cake served for breakfast on the Japanese New Year—these are foods associated with special occasions.

Of Japanese New Year's foods, black soybeans symbolize good health because the written character for beans and good health is identical; fish roe symbolizes fertility, and noodles longevity. To quote Moore, "Every food is invested with meaning, sometimes undramatically but sometimes so importantly that its very mention suffices to define the occasion—champagne."

On the relationship between religion and food, the dietary laws of the Orthodox Jew require strict adherence to practices which are not easily possible in Hawaii, so most Jewish residents are Reform or Conservative. It is interesting how East-West Center Moslem students have reacted to prohibitions—most students adhere to religious restrictions but a few have found a rational reason to experiment with alcohol.

Food etiquette.—How does food etiquette or table manners affect food patterns? Children are taught to eat certain foods in a certain way. To place personal forks into the serving dish is a major offense in our culture, but in Hawaii, serving utensils are not used at family style dinners. Guests, as well as family members, are invited to dip

their personal chopsticks into serving dishes; this is a sign of welcome and acceptance by some Oriental families.

Foods may be rejected if the table manners associated with the food do not conform with one's habitual table manners. Poi, the carbohydrate staple of old Hawaii, is generally not liked by visitors. Its color and consistency are not pleasing to them, and poi is usually first encountered at a "luau" where it is eaten by placing two fingers into a sticky mass, necessitating licking the fingers. We have finger foods, but they do not require finger licking. This illustrates well how table manners may influence what you eat.

Division of labor.—Food is patterned in relation to division of labor—who does what, from production of food to its preparation for the meal. Persons connected with food influence food habits.

In a rural setting, the farmer-father may decide what to plant or what livestock to raise for home consumption. In an urban setting where nearly all foods are purchased, it is generally the mother who makes food choices.

The attitudes of women towards food—whether they consider its preparation a daily grind or pleasure; their ideas on what is appropriate for the family and how flexible these ideas—are important in the food education program.

Other cultural processes.—Food patterns are also affected by other cultural processes, such as child-rearing practices, the learning process, and the multi-activity schedules of work and play. Is the child fed and cared for indulgently, or is feeding done with routine, emotionless practicality? Is food used for reward and punishment? What are the pressures of other activities on time for eating? These all affect attitudes toward food.

APPLIED SCIENCE OF CHANGING FOOD HABITS

Changes in the forces that influence food habits will bring about dietary change in spite of human conservatism about food. The role of nutrition education is to guide and strengthen forces leading to dietary improvement.

In the past, health education in the field of nutrition has been immensely boring, full of exhortations and admonitions according to Mead. However, in the last few decades, increasing understanding of how people learn, studies of new educational methods, and multi-disciplinary research activities in the behavioral sciences have improved nutrition programs.

Some general guidelines in education are suggested since evidence from the USDA dietary studies of households indicates that food habits do need changing.

1. First in importance is to identify and understand the cultural factors of a people which will ultimately influence food decisions.

2. We must acquire detailed knowledge of the environment—of the factors that determine physical availability of food.

3. Skills in educational techniques, as well as competence in subject matter, are necessary.

We have learned that the culture of a people determines their beliefs and attitudes, their established behavior patterns, their needs and values. To bring about change, the new must be compatible with existing beliefs and attitudes. Since people vary in their receptivity to change, Roberts suggests different levels of approach.

Where there is a high level of receptivity, gaining exposure—just getting the message across—may result in change, and a mass education approach will be quite effective. Where there is less receptivity, individual or the small group personal approach that allows for discussion-decision and participation is more penetrating in reaching the hard core of belief.

Helping people change their food habits begins with their readiness to understand that "our choice of foods are expressions of ourselves—as individuals and as members of certain groups—and of our philosophy of life." (Burgess and Dean)

4. It is wise to minimize one's own cultural and professional values. The educator's job is not to tell people what choices to make, but rather to point out interrelations between food, health, productivity, and quality of life—a cycle which can be "good" or "bad."

There is developing an increasing amount of joint research and other activity among anthropologists, sociologists, psychologists, and nutritionists, all of whom are concerned with applying existing scientific knowledge to ameliorate malnutrition and hunger. As the findings of the behavioral scientists are combined with nutrition knowledge, nutrition education will be more effective in achieving its objectives.

IN CONCLUSION

Food patterns are cultural matters, and cultural convictions importantly influence a person's receptivity to change. Nutrition educators who know this will not act in the well meaning but disastrous manner of the monkey who tried to rescue the fish.

Nutrition knowledge will be increasing and food habits will always be changing so that there will never be a final solution. But keeping our fingers on the cultural pulse will provide a background for new approaches to improving dietary levels.

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